In not being able to attend the "Expanding Rural Renewable Energy Systems" public meeting by the Rural Business-Cooperative. I'm writing this testimony about our anaerobic digester project on Haubenschild Farm to show how important the Section 9006 of the Farm Security and Rural Investment Act of 2002 will be to farmers, ranchers, and rural small businesses. I believe this program can help support self-sufficiency, promote rural economic development, and help have a more sustainable environment.

First of all I would like to thank the U.S. Environmental Protection Agency (EPA), the U.S. Department of Agriculture, and the U.S. Department of Energy for sponsoring the AgSTAR Program which Haubenschild Farm applied for and was selected as an AgSTAR "Charter Farm", one of 13 such farms selected nationwide to demonstrate farm-scale anaerobic digestion technologies. The program encourages the use of methane recovery (biogas) technologies at animal feeding operations.

I have always believed a great percentage of the farms in the U.S. could take advantage of this technology, but with the economies in agriculture today most farms will have difficulty financing a digester project from traditional lending institutions. The Haubenschild project financing was achieved by a collaboration of government agencies, through a combination of direct technical assistance, grants and low-interest loans. The AgStar program provided the technical assistance for the project, estimated at $40,000. The Minnesota Department of Commerce and the Minnesota Office of Environmental Assistance offered grants totaling $87,500 for construction of the system and the Minnesota Department of Agriculture was able to offer a $150,000 no-interest loan for the project. This left $77,500 that Haubenschild Farm paid directly.

A copy of the "Final Report: Haubenschild Farms Anaerobic Digester" can be downloaded at: www.mnproject.org...

Since September 24,1999, the digester has produced over 78 million cubic feet of bio-gas which has made 3.2 million kWh of electricity at a value of $226,000.The bio-gas burned is equivalent to 26000 tons of carbon credits. The generator has been running 98.9 percent of the time, 24 hours a day, 7 days per week. It has created enough hot water to heat all the floors in the dairy, saving 800 gallons of LP gas a week in the winter. With the enhanced value of the manure, it makes for a five year payback on the total investment.

The best benefit is the improved surface and ground water quality, enhanced fertilizer value of the processed manure, and the virtual elimination of offensive odors.

Last January of this year, one of the coldest months, Haubenschild Farm produced 109,880 kWh of electricity, and sold 62,860 to the electric co-op, enough electricity for 78 homes. This is a saving of about 35 tons of coal that did not have to be burned to make electricity and 1200 gallons of LP that did not have to be burned to heat water. In the spring when the digestate is incorporated into the ground it will save another 34 gallons per acre of propane or natural gas that did not have to be used to make anhydrous ammonia.

Reasons for Anaerobic Digestion

1. Reduce Odor
2. Generation of Electricity
3. Thermal energy production

4. Increase in value as fertilizer
5. Pathogen reduction
6. Weed seed reduction
7. Greenhouse gas reduction - Carbon Credit value

Clearly, a major change in perspective has taken place from viewing manure as a waste product to it becoming a renewable resource. Its ability to help support a heavily strained power grid system is starting to get some recognition.

Perhaps an even more compelling reason for increased acceptance of manure digesters is their ability to reduce pollutants and odor risks associated with manure. In summary these are expected benefits of an anaerobic digester: Odor control; Generation of electricity; Thermal energy production; Potential increase in value of manure as fertilizer; Pathogen reduction; Weed seed reduction; and Greenhouse gas reduction. As costs of fuel increase and odor complaints from neighbors mount animal production facilities are looking for ways to shave costs by generating their own electricity and reduce dependence on propane/ natural gas to heat process water.

Hopefully as more electric utilities start using greenhouse gas offsets from renewable energy faculties, the trading of carbon credits will become a business opportunity for both the utility and the producer.

Thank You:
Dennis Haubenschild
7201 349th Ave NW
Princeton, Mn. 55371